STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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North Carolina Board of Transportation
Environmental Planning and Policy Committee
Meeting Minutes for January 7, 2004

A meeting of the Environmental Planning and Policy Committee (EPPC) was held on January 7, 2004 at 8:30 a.m. in the Boardroom (Room 150) of the Transportation Building. Nina Szlosberg chaired the meeting. Other Board of Transportation members that attended were:

Tom Betts	Lanny Wilson
Cam McRae	Frank Johnson
Andy M. Perkins, Jr.	Nancy Dunn

Other attendees included:

Julie Hunkins	Allen Pope	Cherie Gibson
Phil Harris	Sherri Creech-Johnson	Mike Stanley
Sharon Lipscomb	Marcus Wilner	Don Voelker
Ehren Meister	Sarah Mitchell	Jon Nance
Richard Hancock	Ken Pace	Mike Mills
Carl Goode	Gail Grimes	Fred Lamar
Pat Ivey	Sandy Nance	Berry Jenkins
Steve Dewitt	Benton Payne	Ron Watson
Mike Pettyjohn	Mike Holder	Jay Swain
Odessa McGlown	Jim Kellenberger	Grady McCallie

Ms. Szlosberg called the meeting to order. The minutes were approved as presented.

Ms. Szlosberg introduced the concept of Context Sensitive Solutions by stating that as our transportation systems matures, communities are demanding more from transportation system providers. Although still important, mobility is no longer communities' primary concern. Today citizens are as concerned about creating infrastructure that is consistent with community values, is aesthetically pleasing, respects the natural and human environments, and is customer friendly. The Department of Transportation knows, as does others in business, that it must listen to and respond to customer's needs in order to be successful in business.

The purpose of Context Sensitive Solutions training is to prepare operations, design and maintenance practitioners to think beyond mobility and consider other aspects of customers needs when solving transportation problems. Context Sensitive Solutions emphasizes product as well as process—an understanding that the product cannot be achieved without going through a positive process that is agreed upon by everyone involved.

Ms. Szlosberg presented two case studies that employed Context Sensitive Solutions in their planning, Hillsborough Street in Raleigh and Grassy Creek Bridge in Ashe County.

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- Case Study #1. Hillsborough Street in Raleigh is one of the oldest streets in the city, but unfortunately has become one of the most dangerous streets in the state. It has an accident rate that is four times the state's average, which can be primarily attributed to pedestrian traffic. Property damage on Hillsborough Street has exceeded two million dollars over a 2-½ year period, which does not include losses in productivity, health care costs, and other costs directly associated with accidents. Planners and engineers have concluded that the problems being experienced are due to the street being out of context with the surrounding area and land use. Charettes were used during the Stakeholder and Community Involvement phase to gather community values and desires. After gathering a diverse group of individuals with different perspectives and needs and creating an environment conducive to active listening, tt was found that these were the most successful charettes ever conducted. In response to a question regarding the sponsorship of the effort, Ms. Szlosberg responded that the effort was a partnership among the state, city, community groups, merchants association, and the university.

- Case Study #2. Grassy Creek Bridge in Ashe County is a one-lane equestrian bridge over a direct tributary of the New River. The New River in one of the oldest rivers in North American and, therefore, has special designation by the federal government under the American Heritage Rivers Act. There are but fourteen of these rivers in the country. A public hearing was held at an historic church to discuss the bridge replacement. The citizens were initially displeased with the design proposed by the Department. After much in-depth discussion, the design was changed to one that is more sensitive to the context of the surrounding environment. Many innovative solutions were employed in the design and construction of the bridge that produced win-win results for the community as well as the Department. The original estimate for the bridge was $770,000; the final cost, after striving to achieve a win-win solution, was $600,000.

The goal for the Context Sensitive Solutions program is to keep people and place in mind. To talk about the Department's Context Sensitive Solutions training program, Ms. Szlosberg presented Jim Kellenberger, Training Administrator for the Division of Highways.

Mr. Kellenberger recognized the Federal Highway Administration (FHWA) as been very instrumental in setting and supporting the direction of the program. Approximately seven years ago, the FHWA requested that certain universities bid on creating a training methodology and program for Context Sensitive Solutions, and the University of Kentucky was selected to develop the course. It was subsequently delivered to the Kentucky DOT. The program has since been modified to meet the needs of North Carolina and the material has been condensed into a three-day course. The main reason for the training is to change the paradigm. Historically, we have altered the environment to fit the transportation system. A paradigm shift forces us to develop a transportation system to fits the natural and human environment.

Another major premise of Context Sensitive Solutions is creating a stakeholder involvement process that addresses stakeholder concerns at the front-end of the process. Hillsborough Street was referenced as a model stakeholder involvement success.

The Center for Transportation and the Environment (CTE) is the delivery partner for the training. In order to effectively deliver training to the 3,000 employees originally planned, assistance from the Office of Environmental Quality, Hydraulics, Roadside Environmental, and FHWA is necessary. Approximately 450 NCDOT and private engineering firm employees have completed the course. In

2004 and 2005, class participants will include personnel from MPO's, RPO's, city planners, conservation groups, resource agencies, and contractors.

The courses are held at ITRE (Institute for Transportation Research and Education) in Raleigh. It is a three-day course with a normal matriculation of forty participants per class. The class is interactive, includes role-playing, and contains a cross-section of attendees.

Mr. Kellenberger provided a copy of the NCDOT Context Sensitive Solutions Goals and Working Guidelines and explained referred to it as the basis for the training that the employees are receiving. This document is attached for reference.

Mr. Kellenberger facilitated an interactive exercise that challenged the EPPC to think about concepts that immediately come to mind when the words "Context Sensitive Solutions" are heard. Responses included:

- Collaboration
- License to come up with original solutions
- Early involvement
- Environmentally sensitive
- Active listening
- Aesthetic solutions
- Respect

When asked about the correlation between Frank Lloyd Wright's Organic Architecture and Context Sensitive Solutions, Mr. Kellenberger responded that CSS closely follows the Organic Architecture principles. Although, engineers are not taught this as a part of their schooling. Organic Architecture concepts may have been taught in school, historically this engineering concept was not encouraged in the Department. If Context Sensitive Solutions is successful, a paradigm shift will occur and this concept will become an integral, natural part of design within the Department.

In a discussion about the type of architecture that is appropriate for a particular environment, the process entails listening to the community to fully understand their needs and evaluating the environment to determine what fits. The context is as important as other considerations, such as eclecticism and variety.

In response to the question, "Does Context Sensitive Solutions slow the process down?", Mr. Kellenberger responded that early involvement reduces the number of surprises, late and time-consuming rework, and excuses, which ultimately results in the overall process going smoother and faster.

Continuing the interactive exercise, Mr. Kellenberger asked the committee to brainstorm the benefits of using Context Sensitive Solutions. The following list resulted:

- Reduced friction with public and resource agencies / increased buy-in
- Saves time
- Increases staff morale (staff is empowered to be creative)
- Department is viewed more positively
- Easier to design for environmental compatibility (less cookbook design); more originality
- Reduces or eliminates the re-do loop
- Saves money

Mr. Kellenberger left the committee with a final thought that each person must understand what Context Sensitive Solutions means to them as this interpretation is translated into the projects that are built and maintained in the field.

Ms. Szlosberg asked the committee for ideas to incorporate Context Solutions into their work with the MPO's, RPO's, and the Division Engineers. One idea was to place a checkbox on the checklist that asks if context sensitive solutions have been considered in the design process. This idea has not been considered yet, but in the future the Department is hopeful that Context Solutions will be an integral part of every project.

Ms. Szlosberg thanked those who attended the meeting and accepted the motion to adjourn.

The next meeting of the Environmental Planning and Policy Committee is scheduled for Wednesday, February 4, 2004 at 8:30 am in the Boardroom (Room 150) of the Transportation Building.

NCDOT Context Sensitive Solutions
Goals and Working Guidelines

BACKGROUND

For years the NCDOT has built transportation infrastructure through the natural and human environment, changing those environments to fit the demands for increased transportation mobility. Nationally and within North Carolina, people are driving more and traveling longer distances. Citizens of our State have become increasingly aware of rapid changes to their natural and human environments. Requests to modify transportation infrastructure projects to protect natural and human environmental resources have, in some cases, turned into demands with lawsuits. Context sensitive solutions is a national approach supported by AASHTO and FHWA to change the way we plan, design, construct, and maintain our transportation infrastructure.

PURPOSE

Provide a framework to implement the Context Sensitive Solutions training with the ultimate goal of an infrastructure than provides safe and effective transportation while preserving and enhancing where possible the natural and human environment.

GOALS FOR CSS IN NCDOT

- **Weave the concepts from the Context Sensitive Solutions workshop "A Better Way" into all aspects of transportation systems planning, design, construction, and maintenance.**

- Integrate the NCDOT Environmental Stewardship Policy into all aspects of our day-to-day operations and decision making.

  Work to fit the transportation infrastructure into the existing natural and human environment.

- NCDOT employees will be advocates for the natural environment as we provide the "lightest possible touch" from the transportation infrastructure. We will initiate or trigger protection of all High Quality Resources through Avoidance as the first alternative, Minimization as the second alternative, and Mitigation as our last alternative.

- NCDOT employees will be the focal point for the human environment needs as we provide transportation infrastructure to our customers. We will solicit input from all stakeholders in every way needed to ensure all relevant needs are addressed and answers are provided to the suggestions and questions. Seeking first to understand the values and interests of the communities and genuinely evaluating the input prior to pre-judging their responses.

GUIDELINES FOR CSS IMPLEMENTATION

Create permit applications within all levels of NCDOT (Maintenance, Operations, Division Design Construct, Purchase Order Contracts) work that show thoughtful concern for the human and natural environment that is applied when making decisions.

Create permit applications for TIP Projects work that show a profound understanding of the Merger 01 process and thoughtful concern for the human and natural environment that is applied when making decisions.

- Actively build good human relationships and coordination with all stakeholders in the Context Sensitive Solution concept through effective communication that all stakeholders can understand and actions that will grow trustworthiness and lead to trust.

- Use critical internal analysis to review and assess our permit applications and the resulting actions to deliver products that will meet or exceed other agencies expectations. This will lead to trust and a Quality Control (NCDOT)/Quality Assurance (other Agencies) relationship that will reduce time spent in the permitting process.

- Understand how to use the AASHTO Design guide and its fullest range of options to achieve maximum flexibility in design. Expand use of the AASHTO Design Guide for Very Low Volume Roads under 400 ADT. Some examples of this are; lower design speeds, restriction of certain vehicle types, high design 2-way, 2-lane roadways in lieu of 4 lane divided roadways, unpaved roadways, returning roadways to adjacent property owners, traffic calming procedures to reduce vehicle speeds, adjustment of vertical & horizontal alignments to reduce cuts and fills. Learn to use design techniques that "lay lightly on the land".

- Use vegetative material as buffers, preserve, enhance, and create animal habitat where possible, use innovative technology to create permanent soil erosion solutions from temporary installations, strive to design soil erosion measures for zero run off conditions, use innovative practices and products to ensure the establishment of temporary and/or permanent ground cover of areas that have been denuded due to removal of root mat prior to rain events.

- Exceed agency expectations by utilizing drainage practices that are consistent with riparian buffer regulations on projects that fall outside of the river basins that currently have buffer regulations

- Let to contract and construct work during periods of the year when it is least harmful to the natural and human environment

- Pursue CSS solutions for projects serving as gateways to and/or along naturally, historically, and culturally significant properties. Identify areas early in design and involve stakeholders in the development of the design.

  Planners, Designers, Constructors, and Maintainers will communicate to ensure that innovative ideas and techniques are shared and doable across all four disciplines. Provide environmental training to stakeholders to ensure stewardship is practiced throughout the Department.

- When CSS solutions are identified for a situation that could create a time delay or cost increase seek consultation about how to proceed from the individuals listed below.

Project Document process -	Greg Thorpe – PDEA
TIP Project Design-	Debbie Barbour –Highway Design
TIP Project Under Construction -	Steve Dewitt – Construction Unit
Division Project & Maintenance	Steve Varnedoe – Maintenance Branch